

Virginia Division of Consolidated Laboratory Services
PROTOCOL FOR THE COLLECTION AND SUBMISSION OF SPECIMENS FOR ISOLATION AND IDENTIFICATION OF INFLUENZA AND OTHER VIRUSES

[September 2005]

DCLS will provide the collection materials and testing services in support of state and federal influenza monitoring and outbreak investigation programs. It also provides collection materials and testing for other viruses as listed in the table below.

Specimen Collection Kits: Isolation kits are prepared by DCLS and may be obtained from the Sample Kit Office at (804) 648-4480 ext.103 or 104.

Isolation Collection Kit Contents:

1. Sterile Viral Transport Media (VTM broth) **Store at 2°– 30°C (36-86°F). Do not use if turbid.**
2. One polyester (Dacron) swab, aluminum shaft (**Avoid wooden shafts**)
3. One small sealable specimen bag with absorbent pad
4. One set of instructions
5. Metal container (**Do not attach labels to these containers.**)
6. Large, sealable, biohazard plastic shipping bag [with "Attn: Viral Isolation" label] with pouch
7. Reference request/reporting form (DGS form # -22-164[Rev.1/89])
8. One cold pack (Store frozen so it will be ready for transport.)
9. One cooler and one return address label (Necessary for Specimen Transport to the lab)

Nasopharyngeal (np) Wash collection kit (*sent only by request*)

1. One 5 cc syringe
2. Sterile screw-cap urine cup
3. Sterile Saline

Instructions for Specimen Collection: ISOLATION SPECIMEN SHOULD BE COLLECTED WITHIN 48 HOURS OF ONSET OF ILLNESS. Each isolation kit provides enough material to sample one patient. Collect specimen as close to clinical onset as possible and ship quickly to the lab (*must be received within 72 hours of collection*) using provided cooler *and* cold pack. Appropriate specimens for virus isolation are listed below:

Virus	Optimal Specimen for Collection
Influenza, Parainfluenza, Respiratory Syncytial Virus	Nasopharynx
Adenovirus	Nasopharynx, Rectal swab, Stool, Conjunctival swab
Herpes Simplex Virus and Varicella Zoster Virus	Mucocutaneous lesion, Conjunctival swab, Brain biopsy
Enterovirus	CSF, Throat, Rectal swab, Stool (feces), Heart tissue, Mucocutaneous lesion
Cytomegalovirus	Throat, Biopsy tissue, Urine

Reference: Manual of Clinical Microbiology, 8th Edition, American Society for Microbiology.

Collection Procedures for Various Specimens:

1. Nasopharyngeal Swab

- Instruct the patient to sit with head slightly tilted backwards. Gently push the tip of the patient's nose back with your thumb.
- Insert the nasopharyngeal swab into the nostril back to the nasopharynx. The patient's eyes will momentarily tear. Slowly rotate the swab as it is being withdrawn.
- Repeat this process using the same swab in second nostril to collect from the nasopharynx.
- Insert the swab into the transport broth bending the wire if necessary to fit completely inside the vial. The broth should cover the tip of the swab in the vial. Tightly cap the vial.
- Label the VTM collection tube with the patient's name and date of collection. Complete the reference request/reporting form (DGS form # -22-164[Rev.1/89]) and refrigerate the specimen until packaging for transport.

2. Nasopharyngeal Wash (if using collection kit for np wash)

- Use only sterile saline to collect wash.
- Obtain collection materials and bring saline to room temperature.
- Instruct the patient to sit with head slightly tilted (70 degree angle) backward and to hold the sterile collection cup. [pictorial]
- Instruct the patient on how to constrict the muscles at the back of the throat by saying "K" sound rapidly and repetitively. Inform the patient that this process may prevent the saline from draining down the throat.
- Fill the 5 cc syringe with sterile saline. Gently push the tip of the patient's nose back with your thumb and quickly inject 1 to 2cc of saline into each nostril.
- Instruct the patient to contain the saline in the nostril for approximately 10 seconds while repetitively saying the "K" sound. After 10 seconds, ask the patient to tilt his/her head forward and collect the saline in

the sterile cup.

t:\isolation\viralisolationsubmissionprotocol2006

- Pour as much of the saline collected from the patient as possible into the vial containing the transport broth, cap and seal tightly.
- Label the VTM collection tube (NOT the metal container) with the patient's name and date of collection. Complete the reference request/reporting form (DGS form # -22-164[Rev.1/89]) and refrigerate the specimen until packaging for transport.

2. Mucocutaneous Lesion

- Carefully puncture the vesicle to expose the fluid within it with a sterile needle (not provided).
- Gently blot up the released fluid with the sterile swab.
- Swab vigorously (without producing bleeding) the exposed base of the lesion to remove infected epithelial cells.
- Insert the swab into the transport broth bending it, if necessary, to fit completely inside the vial. Tightly cap the VTM collection tube.
- Label the tube with the patient's name and date of collection. Complete the reference request/reporting form (DGS form # -22-164[Rev.1/89]) and refrigerate the specimen until packaging for transport.

4. Cerebrospinal Fluid (CSF)

- Collect approximately 3 to 5 ml of spinal fluid and place in a sterile tube (not provided). Tightly cap to prevent leaking during transit.
- Label the tube with the patient's name and date of collection. Complete the request form (DGS form # -22-164[Rev.1/89]) and refrigerate the specimen until packaging for transport.

5. Stool or Rectal Swab

- Place the feces (about the size of a dime) into a sterile urine cup (not provided). If collecting with swab, insert the swab (supplied) 4 to 6 cm. into the patient's rectum. Gently rub the swab against the mucosa to retrieve cellular and fecal material. Place swab into collection tube, cap and seal tightly.
- Label the cup or tube with the patient's name and date of collection. Complete the reference request/reporting form (DGS form # -22-164[Rev.1/89]) and refrigerate the specimen until packaging for transport.

Instructions for Specimen Transport:

- ✓ Ensure specimen is properly labeled and a reference request/reporting form has been completed before transport.
- ✓ Place and seal each labeled specimen in small specimen bag containing the absorbent pad; then place in metal container and securely screw on lid.
- ✓ Place and seal metal container containing the specimen in large biohazard shipping bag.
Place reference request/reporting form in the pocket of the biohazard bag.
- ✓ Place sealed biohazard bag containing the metal container in cooler with a frozen cold pack to **keep specimen refrigerated**. This increases chance of viral recovery.
- ✓ Seal cooler for shipment to lab and affix correct address label (supplied) to cooler exterior.
- ✓ Ship specimen without delay (best to ship same day as collection.)
- ✓ Each shipment of specimens from a submitter must comply with shipping regulations detailed in IATA 1.5 and 49 CFR Section 1720700 [U.S. Department of Transportation.]
- ✓ Send specimen to lab by DCLS courier. Use the following address on all packages:

Division of Consolidated Laboratory Services
Specimen Receiving, Room 155
600 North 5th Street
Richmond, VA 23219-3691
ATTN: Viral Isolation

Result Reporting: Routine monitoring results are mailed to submitter and the Office of Epidemiology. When alerted of a medical emergency or an outbreak, results will be telephoned to the submitter and to the Office of Epidemiology only if a reporting telephone number was provided.

Specimen Rejection: Specimens may be rejected for the following reasons: specimens received by laboratory more than 72 hours after specimen collection; not labeled or incorrectly labeled specimens; not keeping specimens within transport temperature requirements; specimens with insufficient volume; specimens collected in expired viral transport media; or specimens collected in isolation kits not supplied by DCLS. Contaminated specimens may also be unsatisfactory for viral culture.

Requests for Additional Information or Questions: For additional information or questions about specimen collection or transport to the laboratory, please call (804) 648-4480 ext. 271 or 272. To order collection kits, please call (804) 648-4480 ext.103 or 104.